

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/089,800	SOINI, SAKARI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Eric Hug	1731	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on May 23, 2003.
2. ☒ The allowed claim(s) is/are 12,13,16-18,21,25-27 and 29-35.
3. ☒ The drawings filed on 24 June 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.**

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.            |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____.              | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

***Response to Amendment***

The following is in response to the amendment filed on May 23, 2003.

Claims 12, 13, 16-18, 21, 25-27, and 29-35 are allowed.

***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

Claims 17 and 16 are allowed, because the prior art does not disclose or suggest a turbulence generator in a headbox of a paper machine comprising a plurality of superimposed turbulence pipes arranged in rows extending across the entire width of the headbox, each turbulence pipe having a stepped expansion spot where the cross-sectional area increases, such expansion spot is in association with the other pipes within the same row, and wherein the distance of the expansion spot from the slice opening differs for each row, thus providing different levels of turbulence in each layer, and further wherein the closer the expansion spots of a row of pipes are to the slice opening, the closer such row of pipes is to the centermost row of pipes. Claims 26 and 25 are allowed, because the prior art does not disclose or suggest a papermachine headbox having a turbulence generator as described accordingly.

Similarly, Claim 18 is allowed, because the prior art does not disclose or suggest a turbulence generator as described above except wherein the closer the expansion spots of a row of pipes are to the slice opening, the further such row of pipes is from the lowermost row of pipes. Claim 27 is allowed, because the prior art does not disclose or suggest a papermachine headbox having a turbulence generator as described accordingly.

Claim 29 is allowed, because the prior art does not disclose or suggest a headbox having three rows of turbulence pipes with expansion points where the cross-sectional area increases, and having trailing elements with the tips at varying distances from the slice opening, whereby the cross-sectional area after expansion of the outer rows of pipes (first and third rows) is less than that of the centermost row of pipes (second row).

Claim 30 is allowed, because the prior art does not disclose or suggest a headbox as given for claim 29 except that whereby the cross-sectional area after expansion is greater for the second row of pipes (center row) than for the lowermost row (third row) and is greater for the first row than for the second row.

Claims 31, 12, 13, 21, 32, and 33 are allowed, because the prior art does not disclose or suggest a method for forming a paper web by arranging the trailing elements of a headbox so that the trailing elements generating the last filtered layers of stock are closer to the slice opening than the other trailing elements generating previously filtered layers of stock.

Claims 34 and 35 are allowed, because the prior art does not disclose or suggest a paper machine headbox having turbulence pipes with stepwise expansion to a greater cross-sectional area of flow and having trailing elements with tips that vary in distance from the slice opening, wherein the further the distance a row of pipes is from the wire the greater the cross-sectional area of the pipes after expansion.

The prior art teaches varying the lengths of trailing elements within a headbox, but does not teach positioning the trailing elements such that the trailing elements with tips closest to the slice opening corresponding to the last layer formed on the paper machine. The prior art also

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teaches stepwise expansion of turbulence pipes within a headbox, but does not teach varying the lengthwise position of the expansion point in each row of pipes with respect to the location of the slice and/or with respect to the centermost or lowermost row of pipes. The prior art also does not teach providing pipes with expansion to greater or lesser cross-sectional area relative to each other and/or relative to the distance from the forming wire.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dahl et al (US 3,725,197) discloses a headbox having parallel ducts with successive step-like expansion points to wider diameters.

Betley et al (US 3,843,470) discloses a headbox having trailing elements of varying length.

Bubik et al (US 4,137,124) discloses a headbox having parallel ducts with step-like expansion points and having longer trailing elements in the central portion of the nozzle duct.

Verseput (US 3,923,593) discloses a headbox having trailing elements of varying length, whereby longer trailing elements divide the flow into layers and shorter trailing elements provides localized turbulence within each layer.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

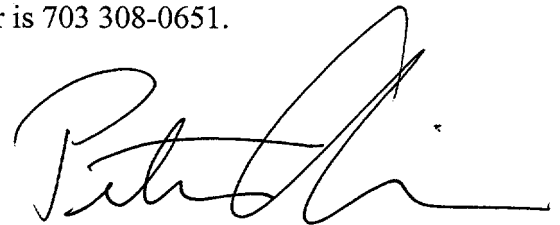
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.



jeh  
July 30, 2003



PETER CHIN  
PRIMARY EXAMINER